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Modernize colleges to help fuel economic recovery: A submission to the Ministry of Colleges and Universities in response to the modernization consultation process

Ontario's 24 colleges will play a pivotal role in establishing Ontario as a global leader in higher education -- producing a workforce with the qualifications and expertise to help drive economic recovery in the aftermath of the COVID-19 lockdown.

In its recently released white paper, [The Future of Ontario's Workers](#), the StrategyCorp Institute of Public Policy and Economy says Ontario faces challenges today that are as great as the challenges that followed the Second World War. "Ontario faces a similar dilemma – technological overhaul, unprecedented and unevenly distributed unemployment as a result of COVID-19, and a labour market that demands new skills over those of the generation prior at an exponential rate."

As the government works to restore Ontario's place as an economic powerhouse, the StrategyCorp paper says the college system must be modernized with greater autonomy and a full suite of internationally valued programs and credentials to provide the strongest possible workforce in a new age of accelerating automation.

Ontario's college presidents have recommended the following to Minister Ross Romano's consultations on modernizing higher education.

1. Micro-credentials

Providing skills training through micro credentials is a great area where Ontario can help people upgrade their skills mid-career or as they transition to new careers. They will provide people with more opportunities to build new skills over time.

This is particularly important as Ontario works to restore its place as an economic powerhouse.

The economic hardship created by the COVID-19 pandemic will force greater numbers of people to seek retraining for new careers.

It's expected many will prefer short-term programs to the time commitments involved in a full degree or diploma program. For example, in the U.S., it was reported over 60 per cent of workers would prefer non-degree training.

It is likely that short-term retraining opportunities will appeal to a significant number of unemployed and underemployed people. This will also support employers who need to provide quick retraining opportunities to their employees and will acknowledge that "learn while you earn" will become a more prevalent pattern for individuals.

However, many learners will need to attain higher levels of post-secondary credentials over their lifetime. While the short-term programs will help them re-enter the job market, the credentials must be “trackable” and “stackable” so they can advance to further diploma and degree programs as their career ambitions grow.

This is particularly important for unemployed and underemployed people who entered the job market directly from high school and will be competing with post-secondary graduates when they seek to advance in their careers. As well, many post-secondary graduates seeking retraining may desire to pursue further studies in a rapidly evolving labour market.

A transformed higher education system must be as seamless and cost-efficient as possible. “Stackable” credentials will help ensure students don’t have to repeat their learning at unnecessary cost to the students and the province.

Recommendation:

Funding approach for micro-credentials

Over the years, other form of short-term training have faltered or not reached their potential to enhance the skills of our workforce because they were too costly for institutions to offer. If micro-credentials are to succeed and reach their potential to significantly improve access to upgrading and skills training, then they must also deliver value to the institutions providing them. Thus, it is critical from the outset that the government gets the funding model right for micro-credentials.

The recommended option is to create a new hybrid funding model for micro-credentials based on a small number of program funding categories, with each category associated with a minimum funded credit weight or learners’ hours. Similar to the university model, programs would be assigned to funding categories based on the current outcomes and delivery model, with additional delivery/capital costs resulting in a higher weight. Each category would also be associated with a full-time tuition rate.

Colleges would work with the ministry to identify the minimum-funded instructional hours each program funding category represents. Instructional hours must be redefined to recognize modern teaching approaches, including hybrid delivery and “flipped” classrooms. Thus, the model must include learners’ independent studies rather than the current student contact hours.

If micro-credentials are mapped against a full credential, it is recommended the micro-credential be funded in a way that makes it worth more than the traditional full credential (e.g., diploma). This includes both higher operating grants and tuition fees to recognize the costs of greater flexibility and the costs of prior learning assessment and recognition. Increasing funding will provide a strong incentive to colleges to develop new micro-credential programs.

Prior learning assessment is a key component in the micro-credential process. Recognizing learning that took place through volunteer work, employment and other educational experiences allows the learner to reduce the number of micro-credentials or components of these credentials, thus saving time and money.



A robust prior learning assessment and recognition system is also required for colleges to quickly assess micro-credentials from other institutions and provide students with credits towards traditional credentials.

What Ontario has traditionally recognized as prior learning assessment and the reasons for considering that learning have drastically changed. Developing a completely different category that appropriately recompenses the colleges and recognizes the speed and flexibility required in this area is very much needed to support the process of micro-credential adoption.

2. Three-year degrees and micro-credentials

Ontario should allow colleges – which already have the authority to award four-year degrees – the ability to award three-year degrees in applied areas, using micro-credentials to provide a quick and effective route to upgrading three-year diplomas to degrees. The degrees would meet all provincial standards and maintain the high quality of the province’s post-secondary programming.

Introducing three-year college degrees would offer the government the opportunity to use its new focus on micro-credentials to improve in a significant way the career opportunities of hundreds of thousands of college graduates who currently hold three-year advanced diplomas – and do it almost immediately. This would create a huge win for many employees and their employers in Ontario in a very short time.

Currently, colleges can deliver four-year honours degrees but not three-year degrees. Instead, colleges are required to offer three-year advanced diplomas in many areas important to the economy. However, these diplomas are not offered or understood anywhere else in the world. They are also not viewed by employers in Ontario as equivalent to a degree.

Almost 70 per cent of the colleges’ three-year advanced diplomas meet the requirements for degrees set out in the provincial qualifications framework, except they are missing “breadth” or general interest courses. Thus, college students are often granted a lesser credential than their education and training warrants.

Using a few micro-credentials, graduates of these diploma programs could be transitioned to three-year degrees in a very short time, changing their long-term career prospects significantly.

Today, anyone interested in upgrading a college diploma to a degree would need to enrol in full-time courses, usually at night, and complete them over a long period of time as they moved from a three- to a four-year credential. This is a time-consuming and costly approach to upgrading that few take on. As well, it is not a good solution for an economy that needs highly trained people who can advance in their roles over time. The combination of a three-year degree and the engagement of micro-credentials to fill the general interest course gap creates a new and exciting opportunity for efficient upgrading of a three-year diploma to a degree.

The ability to upgrade from a diploma to a degree matters as three-year year advanced diplomas graduates often hit a glass ceiling when they want to move into management. Equally, students in diploma programs that decide they want to move to a degree have few easy options to achieve that goal.



When the three-year degrees idea was first proposed to the College Student Alliance, their first question was whether there could be a path for alumni wanting to transition from their three-year diplomas to a degree. This would not have been easy in the past but micro-credentials can be a game-changer that makes this possible, allowing people in mid-career with financial obligations to advance their career opportunities in an affordable, efficient way. The student association continues to support this.

Minister Romano has often asked colleges what tools he can provide to support the success of colleges going forward while advancing the economy and helping workers improve their career prospects. Three-year degrees would be the single biggest opportunity to do both.

A number of employers – including the federal government – will only hire people with degrees. In a number of technical sectors such as the electricity sector, people can't advance into management without a degree, even when a sector is desperate for talent at that level and workers with diplomas have all the training required for the job. Right now, this often means mid-career employees need to spend years acquiring a degree at night.

Recommendation:

Giving colleges the ability to award three-year degrees can be easily achieved through a ministerial consent established in the Post-secondary Education Choice and Excellence Act. James Brown at PEQAB has already been engaged in discussions about three- year degrees and believes the proposal has merit and could be done relatively easily.

Some universities may object to this but universities have no restrictions on the programs they can offer and over the past several years have made enormous advances into areas that were entirely the purview of colleges, such as applied programs and post-graduate certificates. It is time to give colleges – now over 50 years old – the same ability to offer programs needed in their local communities to fill industry needs and allow students who want an applied education to remain in their community while studying.

Approving three-year degree programs at colleges would also introduce greater equity into Ontario's post-secondary system. Students who prefer an applied educational environment would have the same access to three-year degrees as university students, as all Ontario universities can offer three-year degrees.

Enabling colleges to offer three-year degrees would align the applied education credentials awarded in Ontario with those offered in other jurisdictions. In virtually every other country in the world, graduates of three-year post-secondary programs earn degrees when they complete their studies, regardless of whether the programs are in liberal arts or applied studies. The Ontario three-year advanced diploma is an anomaly that is not understood outside the province.

Establishing three-year degrees in Ontario would give appropriate recognition to the level of skill achieved by graduates of these programs as well as greatly strengthen the "Ontario brand" on the world stage, making sure Ontario's programs appeal to more international students. This will give Ontario's college an important new marketing tool abroad. Colleges could pivot very quickly to offer three-year

degrees as much of the mapping has been completed. An example of how quickly colleges can adjust has been demonstrated in the implementation of independent nursing degree programs at colleges.

3. Other degree programs

Ontario should also pursue other reforms to establish its college system as a leading post-secondary destination.

Recommendations:

Four-year degree programs

Research conducted for the Ontario government has confirmed the colleges' four-year honours degree programs are successfully preparing graduates for rewarding careers.

There is no reason why the province imposes a cap on the number of four-year degree programs that a college can deliver. Individual colleges should make those decisions based on local demand. Today, a number of colleges have reached or are approaching their cap, effectively limiting opportunities for degree education in highly sought after areas in some local communities.

Master's degree programs

Ontario should capitalize on the strength of its specialized programs for in-demand fields such as robotics, cybersecurity and animation. The creation of new master's degree programs in applied areas at colleges can help attract more university and college graduates to programs that enhance the qualifications and expertise they will take into the labour force.

In most cases, the time spent in school would be equal to the time spent pursuing a BA followed by a post-graduate certificate at college.

Currently, there are few options available for graduates of college degree programs who want to pursue master's level studies in applied areas. Ontario's colleges have had to build partnerships with jurisdictions outside the province that have a competitive advantage because their programs already exist.

For example, the British Columbia Institute of Technology (BCIT) awards master's degrees in applied programs. A number of Irish Institutes of Technology also offer master's degrees. Again, colleges offering master's programs in their specialty fields builds the Ontario brand.

The master's degree would also appeal to more university graduates who need to acquire career-focused qualifications and expertise. It would also provide graduates with more opportunities for entering rewarding careers and advancing in those careers. This is particularly important in today's technology-driven economy.

As well, establishing the graduate programs would mean more instructors are available to support the expansion of high-demand programs in areas such as animation. It would also create more opportunities to engage in applied research that leads to the commercialization of products and services.

4. Digital learning

Ontario has a tremendous opportunity to become a world leader in digital learning, significantly improving the student experience. The expansion of digital learning will allow colleges to provide the best possible student experience for all learners, no matter what their learning style or where they live. However, the expansion of digital learning will require a strong fiscal commitment from the government to support post-secondary institutions in expanding their digital infrastructure and expertise. If Ontario is to be a world leader in this area, colleges must be able to invest in state-of-the-art infrastructure and pedagogy.

Equally, it will be essential for Ontario to invest in resources to ensure students throughout the province have access to remote learning opportunities. Every student must have access to digital learning as the internet and Wi-Fi are necessities, as essential these days as electricity and running water.

As the StrategyCorp Institute of Public Policy and Economy notes in its white paper, “The Future of Ontario’s Workers,” the province can only make a seamless transition to online learning if communities have access to reliable broadband infrastructure. Investments are also needed for instructional design and faculty training.

To attract as many international students as possible, the StrategyCorp institute calls for programs with high international enrolment to be moved online immediately.

Recommendations:

To jumpstart the colleges’ leadership in this area, the Ontario government should:

- Provide funding for instructional design services and faculty training to support the development of alternative course delivery at colleges. Colleges were able to transition to remote teaching in a short period of time out of necessity. To improve on this foundation and develop courses with immersive, high-quality online content requires base support for skilled individuals who can assist faculty in this work. Utilizing existing college and provincial partners (e.g., OntarioLearn, Contact North), this will ensure common standards and quality approaches to online delivery for students.
- Fund colleges to immediately upgrade critical IT infrastructure, software and services to support high-quality advanced digital programming and the development of new simulation tools. These upgrades will improve the student experience by enhancing digital student and learning services that drive, motivate and measure student performance in remote learning. Encourage colleges to utilize common platforms and open source systems where possible to foster long-term collaboration. For example, the college libraries’ collective initiative to replace aging software with a next-generation, cloud-based enterprise library system that provides web technologies and seamless discovery services to manage physical, digital and electronic library resources in a single system.

- Create a student technology fund to ensure all students have access to the critical technology required to access new programming.
- Work with colleges and regulatory bodies to drive the acceptance of technology solutions to regulatory requirements where possible (e.g., simulation labs to meet needs exclusively addressed today by clinical placements. The limited availability of placements is a barrier to the graduation of many of the health-care workers in high demand).

Over the longer term, the government should:

- Incent collaboration in the design and delivery of new, technologically advanced programming. This would include the creation and embedding of new immersive content and media, the creation of simulation and augmented and virtual reality solutions, the delivery of increased mobile learning and providing faculty with the training and supports necessary to teach high-quality online courses. This work should be supported by an inventory of existing technology assets for open sharing with the system.
- Support the establishment of a college “digital institutional repository,” drawing on college academic and digital expertise. A shared repository would drive best practices across the college system in the technology space, establish minimum standards for technology-enabled curriculum and act as a place to hold and access common digital assets, AR/VR materials, OER and immersive, high-quality media content for use by all colleges. This repository could also serve to meet research data management requirements stemming from the tri-agencies and other grant funders. This repository would be open to colleges using an attribution model to encourage sharing among institutions and equitable access throughout the system.
- Invest in IT infrastructure, software and services on an ongoing basis so colleges can adopt and implement next generation technology, such as the libraries’ collective initiative to replace their aging software with a next generation, cloud-based enterprise library systems, to support high-quality programs and services that give students the skills they need to drive the digital economy.
- Establish incentive grants to drive creation and adoption of OERs with the aim of reducing commercial textbook costs to students.
- Engage with the sector in developing a common micro-credential framework and funding approach that meets the needs of industry and workers. Leverage existing college resources and partnerships in order to develop and promote college micro-credentials (e.g., OntarioLearn, OCAS).
- Take a cross-ministry approach to expand broadband access to northern and rural areas to ensure the benefits of advanced technology are universally available.
- Expedite the achievement of workplace training requirements for apprentices through simulation, augmented reality and next-generation technology. This would benefit both apprentices and employers by fast tracking apprenticeship completions in a time of skill shortages and reducing training costs for employers. It would also modernize delivery and likely be attractive to new apprentices. This initiative will be particularly important coming out of the pandemic when many SMEs that would normally hire apprentices will be struggling financially.

- Work with regulatory bodies to have AR, VR and other simulations recognized as work-integrated learning, particularly in rural and northern communities where it can be a challenge to get placements for students.

Students with disabilities

The rapid transition to remote learning in winter 2020 created a broad range of challenges for students, particularly for students with disabilities who require extra support.

Recommendations:

Colleges require additional funding in order to help these students adapt to the more self-directed environment of online learning. This includes funding for accessibility services to ensure students have access to timely supports, particularly as it relates to learning strategy services and accommodation testing. Accessibility services also have a critical role in optimizing learning for students by making course material fully accessible in alignment with the principles of universal design for learning.

Students with disabilities will need financial support for assistive technologies beyond the basic technology required by most students. For example, students who are hard of hearing/deaf require audio boosters as well as transcription services or closed captioning for virtual lectures.

Students will also require extra support with learning strategies and transferable skill development. Transferable skills such as time management and digital literacy will be essential for online learning and will support the students' transition to the workforce after graduation. Colleges also expect that students with mental health disabilities will require additional support to deal with pressures such as worsening anxiety over financial issues.

5. International students

Ontario can become the top study and stay destination for international students who are pursuing post-secondary education. The province must pursue new opportunities to attract and retain students, particularly in communities outside the GTA, and to diversify international student streams. A number of other challenges also need to be addressed to support the colleges' efforts to attract international students in the post-pandemic era.

Recommendations:

Partnerships and collaborations

Incentivizing and encouraging colleges to come together with common purpose and goals can be a winning strategy to achieve growth in smaller communities and positive outcomes across Ontario. Although recruiting international students has not been a key issue in recent years, colleges have been partnering with other colleges on this front. Diversification of international student streams has been more of a concern as there is currently a heavy concentration of students from certain countries. Colleges have also been working together to diversify the international student marketplace.



However, building new markets is challenging and costly. Government funding to diversify the marketplace would be very valuable and would be best placed in supporting new marketing materials, leveraging trade commissioners to support colleges even further and assisting with start-up funds where a group of colleges come together to engage in developing a new market.

Provincial incentives to increase the number of existing and new partnerships among colleges in areas such as academic programming would also be helpful. Such incentives would support colleges in smaller communities to provide more robust program offerings to their communities. Furthermore, colleges in communities with similar workforce needs could be incentivized to develop more shared programming and teaching.

Ontario colleges operate in a very competitive market and their program offerings need to be as attractive as possible to draw international students – a reality that is just as true for the domestic market. Colleges need the ability to deliver more degrees to enable them to offer a full range of relevant credentials that are understood internationally. Partnerships with other colleges can help achieve this much more quickly and these kinds of partnerships should be supported and incentivized by the province.

Economic development

Many smaller communities face both demographic and economic challenges. To address these challenges, Ontario needs to implement strategies that will support the longer-term economic health of smaller communities. This will help promote the retention of graduates for the workforce through the availability of good jobs for all graduates, whether they are domestic or international.

The ministry needs to ensure that the Ministry of Economic Development, Job Creation and Trade is brought into the discussion to work with colleges, employers and local economic development organizations on how best to support the retention of the future workforce. For example, the two ministries need to work together to expand the regional immigration pilot to support employers in more communities to hire international students and graduates.

As well, despite having job openings, some employers will not consider hiring international students or graduates. An employer engagement strategy and training in diversity and inclusion will ensure international students and graduates feel welcomed in the workplace. This is an area where the ministry in partnership with other ministries could play an important role.

The province needs to provide incubator funding for colleges to drive economic development in local communities. The funding will help increase applied research activity, support the local economy and create more job opportunities for international students.

International student recovery fee

The international student recovery fee (ISR) is now a significant source of revenue for the province and was expected to generate about \$90 million for the government in 2018-19. The government should forgo charging the ISR and allow colleges to use the funds for strategies to recruit and retain



international students. The use of the ISR for this purpose would be invaluable in addressing the long-term economic challenges in Ontario's communities.

Community infrastructure and supports

Recruiting international students to smaller communities with the hope of retaining them as long-term members of those communities will require the government to invest in the kind of infrastructure that will encourage international graduates to stay. This includes strategic investments to ensure that both international and domestic students have access to housing and other supports, as well as a path to a job that strengthens Canadian industries and communities when they graduate.

Currently, there are few services or supports for international students to look for work within local communities other than the ones provided by colleges through their career services departments. Enabling international students to access services provided by employment agencies would help them to find jobs. Employment Ontario services should be made available to all graduates, including international students.

Partnering with the federal government

Colleges appreciate the support of the province in promoting the interests of Ontario colleges and international students to the federal government. With the long-lasting impact of the pandemic, this support needs to continue to ensure that immigration policies and processes enhance the ability of colleges to recruit international students through both the visa system as well as the routes to permanent residency and citizenship.

Larger companies looking to hire international students often find immigration policies to be challenging. The province should lobby the federal government to eliminate red tape for companies trying to bring in talent from other countries. Engagement from the province is needed to ensure that more communities in Ontario become eligible for the northern and rural immigration pilot, which is an excellent strategy for attracting and retaining international students.

The province also needs to lobby the federal government to increase the number of hours that international students are allowed to work to 24 hours per week, from the current level of 20 hours. This would align better with the scheduling of shift work and it may also encourage more local employers to hire international students for part-time work, which often leads to full-time opportunities upon graduation.

6. Red tape

The province can assist the college sector to play a prominent role in Ontario's efforts to strengthen the economy by cutting or streamlining red tape. COVID-19 has accelerated the speed in which colleges must adapt to the new and changing demands of employers and local communities. The ministry must understand the college business model when applying its reporting time frames as well as reviewing academic programs. For example, a three-week delay in a program approval could result in a semester or a full year lost to recruit new students.

Recommendations:

Reduce the frequency of reporting and audits

Colleges are proposing a reduction in the reporting requirements to reduce overhead costs and staffing. For example, the Ministry of Colleges and Universities and the Ministry of Labour, Training and Skills Development both require audited reports for every project or program, even when the projects involving small amounts of funding.

A materiality threshold for reporting should be established based on the total amount of funding that a college receives and not on individual program funding. Similarly, threshold approvals for special purpose program funding transfers (i.e. from one program envelop to another) should be established. In addition, the ministry should maintain data online and use standard reporting forms so that colleges do not have to duplicate information already provided.

Expedited approvals for Section 28

The Section 28 regulation has identified thresholds and criteria that indicate when a College project must be submitted for S.28 approval. These thresholds require a significant number of college projects to be subjected to the S.28 process and the government is slow to respond with approvals. These thresholds should be re-visited.

As well, the review process should be shortened as it is challenging to hold third-party contractors to their pricing and capacity to handle work when there is a 90-day period of uncertainty.

Also, the time horizon for cash-flow projections related to debt agreements should be limited to 10 years despite the term.

Colleges are proposing the government set a 90-day maximum threshold for completing the entire review, approval and legal review of contracts for section 28 submissions. This would include the time required for all ministries to conduct their reviews.

Apprenticeship modernization

The apprenticeship system is complicated and confusing for students, parents, employers and training delivery agents. Colleges are proposing the apprenticeship system be streamlined and modernized.

For example, the province should authorize the Ontario College Application Service (OCAS) to register college-bound apprentices. This would create a one-window application process for apprentices that is visible and easy to use. It would also dramatically expand the focused marketing of the benefits of apprenticeship to the hundreds of thousands of high school students (especially women and under-represented Ontarians) and their parents, teachers and guidance counsellors.

The province should also expand OCAS's mandate – at no cost to government – to include personalized digital apprentice registration, electronic logbooks and regular reminders. OCAS should also be expanded to include a job-matching service that encourages employers to hire apprentices and promotes careers in the trades to students.



These changes would allow colleges – which deliver 85 per cent of all the in-school apprenticeship training – to give their apprentices the same supports as union TDAs. Currently, college apprentices are disadvantaged by a confusing and convoluted system that does not recognize them as post-secondary students or support them through their journey. Colleges need to be able to give these students all the advantages available to other post-secondary students and union apprentices.

The OCAS service would not affect union TDAs unless they elect to use the OCAS application system, branded with their own logos and with their confidential data kept separate from colleges and other TDAs.

As the government winds down the Ontario College of Trades, Ontario colleges also have the potential to take responsibility for a number of activities, including:

- Promoting the skilled trades, since colleges can effectively advocate for apprenticeship to potential employers/sponsors, apprentices, parents, guidance counsellors and teachers.
- Invigilating certificates of qualification examinations.
- Providing ongoing education for tradespersons, including mentorship and business skills development for owners or executives in larger enterprises.

7. Applied research

Ontario's colleges partner with many small and medium-sized businesses on real-world research that helps the businesses become more efficient and develop new products that can be commercialized and marketed.

The return on investment is very high, predictable, and quickly achieved as employers only co-invest in innovative ideas that have an excellent chance of a high return. The research is expected to quickly contribute to the bottom line through higher sales or reduced costs.

Most small and medium-sized businesses don't have the capacity to do research that leads to innovations in their sector. Government investments to increase the applied research at colleges will spur economic development, create more jobs and provide more students with opportunities to conduct research that delivers measurable results in the economy.

Recommendations:

Ontario colleges could do far more to help their communities recover from COVID and to pivot successfully to a digitizing world in which protectionism has become a serious concern, while achieving an exceptional revenue per dollar invested similar to Quebec's \$4.30 return on investment.

The Ontario government should approve the following recommendations.

These recommendations would enable Ontario colleges to catch up to the impressive level of applied research activity driven by small and medium-sized enterprises (SMEs) at Quebec's CEGEPs. This would lead to higher job creation by local Ontario SMEs and industries, in part by helping them compete competing more successfully to get Ontario's share of federal research funding.

1. The Ontario Research Fund should target more college-industry partnerships for demand-driven innovation projects by matching Quebec's \$20-million annual capability funding. This would mean:
 - Small and medium-sized enterprises (SMEs) would know that colleges would have researchers readily available when they needed a new/improved product/service/process 'at the speed of business.'
 - Colleges would implement a number of small-scale industry-requested applied research projects according to pre-determined general selection rules, with appropriate annual reports to the Ministry of Colleges and Universities.
 - Colleges could provide more students with industry-relevant work-integrated-learning research experiences.
2. Colleges could also offer pre-consulting technology audits for SME investments. In a post-COVID world, many more SME clients will need practical workplace-specific innovation and technology advice to make decisions about investing in equipment, redesigned workplaces and new skills for their workforce.
 - In most cases, SME executives will want an initial brand-agnostic review of new equipment, along with a preliminary workflow analysis based on sophisticated industry planning software. In some cases, SMEs might want an overview energy audit with advice about how to go about retrofitting and/or building renovations.
 - Colleges propose to use final-year students – under the direction of industry-experienced professors – to conduct technology audits for SMEs, to identify specific opportunities. When opportunities requiring specific engineering skills are identified, the college contact could recommend the SME hire professionals for specific tasks.
3. The ORF program design and project evaluation for college programs should rely on college applied research experts – academic and industry representatives with extensive experience with college applied research.
4. The Ministry of Colleges and Universities should increase the Ontario applied research ROI further by allowing colleges to respond 'at the speed of business' to employer requirements for specialized, internationally recognized credentials that anchor jobs and ROI in Ontario. The government should:
 - Approve new micro-credential programs at colleges that allow colleges to offer recognized, stackable work-ready credentials.
 - Remove the cap on the number of four-year honours degree programs that can be offered at a college.
 - Approve the delivery of career-focused three-year degree programs at colleges that align with similar degree programs in about 50 other countries.
 - Approve the creation of new career-specific master's degree programs that clearly support business applied research and attract new employers to the province.

8. Financial challenges

In recent years, colleges have had to cope with reductions in provincial funding for their programs. The colleges' per-student revenues from operating grants and domestic tuition fees – adjusted for inflation – declined after hitting a peak in 2007-08. By 2018-19, these revenues were estimated to be three per cent lower than in 2007-08.

Much of the decline was due to the restraints in the 2012 Ontario Budget. In recent years, colleges have had to cope with a 10 per cent cut in tuition revenues that was never offset by provincial grants, losses in operating dollars due to declining domestic enrolment, the losses associated with inadequate funding for apprenticeship training and the lack of funding for Employment Ontario.

Colleges did everything possible to try to mitigate the cost pressures, including an increasing reliance on part-time faculty. However, colleges eventually ran out of options. Where international tuition revenues had traditionally been used for capital projects, colleges were forced to apply some of those revenues toward operating costs in order to sustain their programs.

However, the COVID-19 pandemic prevents many students from entering Canada this year. While the federal government has announced changes to allow international students to complete more of their studies online (while still qualifying for a post-graduation work permit in Canada), the impact of the pandemic on international enrolments and on the revenues from international students is still uncertain.

The pandemic has had a significant financial impact on Ontario's colleges. It is currently estimated colleges will face about \$270 million in additional costs for the one-year period between the winter term of the 2019-20 academic year and the winter term of the 2020-21 academic year. That includes the costs for the transition to alternative delivery modes, IT resources for students and staff and financial supports for students.. It also includes the costs related to physical distancing measures and additional operational expenses such as more vigilant cleaning practices which alone are expected to reach \$150 million.

Colleges are also projecting pandemic-related revenue losses of more than \$1 billion and have issued more than \$30 million in refunds to students.

Colleges are employing a range of mitigation strategies, including using their available surpluses, to address the unexpected financial impact of the pandemic on their budgets. However, despite these measures, the net deficit for the college system is currently estimated to be about \$250 million. This number is a moving target as some cost pressures are still being calculated and there is still some uncertainty around enrolment.

Recommendation:

The government needs to find a long-term solution for the sustainability of college programs to ensure communities have continued access to a workforce with the qualifications and expertise to restore Ontario as an economic powerhouse. A working group should be established with government and the post-secondary sector to discuss how to rethink funding in the sector in a post-pandemic world.



Conclusion

Without question, this is a pivotal time for post-secondary education in Ontario and across the globe, and the province has an opportunity to emerge from the pandemic in a world-leading position – in large measure because of Ontario's unique college system.

However, to make the most of this opportunity, Ontario must unleash the power of its colleges, recognizing the colleges' capacity to respond effectively, efficiently and flexibly to the demands of a fast-moving economy.

Colleges need a greater level of autonomy over their credentials and less red tape that hampers their ability to move quickly to take advantage of new realities. The government must also make strategic investments in core funding and infrastructure to allow colleges to make the most of their leadership opportunities in workforce training, digital learning, apprenticeship and international education.

These measures will ensure Ontario is indeed a world leader in the design and delivery of post-secondary education that equips more people for rewarding careers and restores the province's place as an economic powerhouse.